



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

MICROSCOPY.¹

The Pycnogonids.²—Three genera of Pycnogonids, each with a single species, are to be found at Wood's Holl,—viz., *Pallene empusa*, *Phoxichilidium maxillare* Smith (*Anoplodactylus lentus* Wilson), and *Tanystylum orbiculare*. During July, August, and September these are found with eggs. *Pallene* inhabits the hydroids (*Tubularia*, *Pennaria*) on the piles of the wharves, and is also common on the red sea-weeds below low-tide mark. The hydroids or sea-weeds as soon as collected were brought into the laboratory and worked over piece by piece. Each bunch was in turn swished rapidly backward and forward in a dish containing a small amount of water, so that the Pycnogonids were shaken loose and could be easily picked out. The other genera were more easily found, and on separating the masses of hydroids, etc., could be readily seen clinging to the stems. The males of *Pallene* carry on each pair of ovigerous legs a small bunch of eggs. Each bunch contains from one or two to fifteen or twenty eggs. The eggs of *Phoxichilidium* and *Tanystylum* are individually much smaller than the last, but are very numerous, so that the bunches are much larger, especially so in the former. *Phoxichilidium* carries several bunches strung along on the ovigerous legs; the bunches are white, and very conspicuous against the purple color of the adult. *Tanystylum* has smaller bunches of eggs, with the individual eggs larger than the former, and the masses are carried so that they form a circle of clusters held against the ventral side.

The adults with eggs were put into alcoholic picro-sulphuric acid for several hours, and then gradually carried through different grades of alcohol. Other methods of hardening gave far less satisfactory results,—i.e., boiling water or Flemming's solution.

To prepare the eggs and embryos for study they were passed through absolute alcohol (one hour), turpentine (two to four hours), soft paraffine (one hour), hard paraffine (one to two hours). They were cut in paraffine, and fixed to the slide with albumen fixative; then back again through turpentine, absolute alcohol, ninety-five per cent., eighty per cent., seventy per cent. alcohol to Kleinenberg's hæmatoxylin, where they were left for a very long time (twelve to forty-eight hours); then washed fifteen minutes in acid alcohol, and up again

¹ Edited by C. O. Whitman, Clark University, Worcester, Mass.

² T. H. Morgan. *Studies Biol. Lab.*, V., 1, 1891, pp. 2, 3.

through the alcohol to turpentine and into balsam. In Pallene each egg was in many cases pricked with a very sharp needle before going into absolute alcohol. It is necessary to do this under a dissecting microscope. By these methods very excellent results were often obtained, and after many failures of other methods was found to be the only satisfactory one. In Pallene the larger size of the egg makes a study of the earlier stages much easier, but the other genera have a much simpler development.

Method of Rendering Opaque Nemertean Eggs Transparent.—The eggs of Nemerteans which have a direct development are opaque, and cannot be rendered transparent by ordinary reagents. This difficulty was overcome by Barrois³ by the use of carmine and glycerine. The mixture must be allowed to act gradually, otherwise it causes deformations. Three mixtures, containing glycerine in increasing proportions were used, the first consisting of one part glycerine to four parts water; the second, equal parts of glycerine and water; the third, three parts of glycerine to one of water. Enough carmine was added to give the mixture a wine color. Each mixture was allowed to act some minutes, and then the eggs were examined under slight compression.

Method of Narcotizing Hydroids, Actiniæ, etc.—In order to kill Hydroids, Actiniæ, and similar forms in an expanded condition, a little expedient may be recommended which the writer has tried in many places and on many forms, and has uniformly found of value. The animals to be killed are left in a small quantity of the salt water in which they were brought in, until this becomes rather warm and stale, or until, in fact, they are weakened by the narcotizing effect of impure water. This manifests itself in one or two ways; some forms draw themselves completely together, while others hang half expanded and limp in the water. They are then transferred in colonies or in large groups into *fresh salt water* which is at the same time cool. The effect of a mass of cool, pure water is such as to cause the animals to expand fully and promptly. Immediately as the expansion is seen to reach its maximum, in the course usually of a few seconds, they are transferred by a quick motion to some rapid killing reagent. After the long narcosis in poor water, the polyps appear to lack energy enough to contract forcibly, as is usually the case. As killing reagents, alcoholic corrosive sublimate and picro-nitric acid have given the most uniformly good results. In this way the most susceptible

³ Recherches sur l'embryologie des Némertes. Lille., 1877, p. 101.

Actiniæ may be easily preserved expanded and intact, and Hydroids of all genera yield good specimens. The transfer to fresh sea-water is the only point requiring care. No time limit can be given, as the factors are too variable; but a little practice is sure to show the character and advantages of this method.—H. B. WARD, *Cambridge, Mass.*

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

Boston Society of Natural History.—December 3d, 1890.—Dr. J. Walter Fewkes spoke of “The Summer Ceremonials of the Zuffi Indians: a Study of Aboriginal Religion.”

December 17th.—Prof. A. E. Dolbear read a paper on “The Physics of Crystalline and Cellular Structure.” A communication on “Kame Ridges and Hillocks of Hingham,” by Mr. T. T. Bouvé, was also presented.

January 7th, 1891.—Business: Election of members. Final action on the proposed new by-laws was taken by the society. Mr. J. G. Owens read a paper on “A Few Games of the Zuffi Indians.”

January 21st.—Prof. A. E. Dolbear read a paper on “The Physics of Crystalline and Cellular Structure.”

February 4th.—Mr. G. H. Barton described “The Hawaiian Islands: Their Natural History and Inhabitants.” The paper was illustrated with a stereopticon. Mr. J. H. Emerton exhibited a new model of Oahu, which he has lately made for the museum of the society.

February 18th.—Mr. Warren Upham spoke of “Walden, Cochituate, and other Lakes Enclosed by Modified Drift.” Prof. W. H. Niles presented a paper on “Notes upon Asphaltum Deposits in California.”

March 4th.—Prof. W. M. Davis presented a paper entitled “Illustration of the Faulted Monoclinical Structure and Topographic Development of the Triassic Formation of Connecticut by a Working Model.” Prof. N. S. Shaler spoke on the “Antiquity of the Glacial Period.” Prof. Shaler called the attention of the society to the Dorkin photographs.

March 18th.—Dr. G. Baur read a paper on “The Importance of a Scientific Investigation of the Galapagos Islands.” Prof. W. O. Crosby made a communication “On the Colors of Soils.”

April 1st.—Dr. H. C. Ernst spoke on the latest developments in the “Germ Theory of Disease,” illustrated by stereopticon and exhibition of tube-cultures.—J. WALTER FEWKES, *Secretary.*

Am. Nat.—April.—7.